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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/337,667	06/22/1999	YOSHIHARU SASAKI	Q54770	9266

7590

07/15/2003

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EXAMINER

PHAM, HAI CHI

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/337,667

Applicant(s)

SASAKI ET AL.

Examiner

Hai C Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P r i d for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) 6-11, 12/6-11, and 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,12,17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 6-11 and corresponding dependencies of claim 12 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

Claims 13-16 remain withdrawn from consideration as being directed to a non-elected invention, the invention having been constructively elected by original presentation as discussed in the Office Action mailed 23 October 2000 (Paper #6).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 12/1, 12/2, 12/4, 17, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takanashi et al. (U.S. 4,527,171) in view of Koguchi et al. (U.S. 5,578,824).

Takanashi et al. teaches the claimed invention except the toner sheet, provided as a cut sheet form, being wound onto a surface of the image-receiving layer (claim 1), the image receiving layer being provided in a form of a cut sheet (claim 19), the

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recording paper being attached to the recording drum by suction (claim 20). Thermal binder transfer sheet (4) is an image-receiving sheet having an image receiving layer (4b) and a substrate (4a). The sheet is attached to the recording paper by roller (6) to adhere the image-receiving layer on a surface of at least a whole recording region of the recording paper (see Abstract lines 11-14). The substrate is separated by take-up reel (5b) such that only the image-receiving layer is transferred onto the recording paper (see column 2, lines 36-45). All of the method steps in Takanashi et al. are clearly performed on the recording drum (2), as shown in Fig. 1.

Koguchi et al. discloses use of donor sheets (10) provided as a cut sheet form, in place of a roll, wherein a toner sheet is wound onto an image-receiving material (12). Koguchi et al. further teaches the image-receiving material (12) being provided in the form of a cut sheet, and the recording drum (34) being a vacuum-type drum on which the image-receiving material and the toner sheets are securely wound and aligned in a superimposed manner with the help of the mount/dismount mechanism (36). Koguchi et al. further teaches the color image being recorded with a plurality of donor sheets (for YMCK) without providing any additional image-receiving sheet. (col. 21, line 56 to col. 22, line 19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute toner sheets, provided as a cut sheet form, for the roll in the Takanashi et al. apparatus, as well as the image receiving layer as a cut sheet along with the use of a vacuum-type recording drum, wherein the toner sheets are wound onto the recording paper and thus onto the image receiving layer thereon, because such substitution would overcome the various disadvantages of roll media,

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thereby providing greater flexibility in providing desired colors and reducing operating cost through reduced media cost as a consequence of increased manufacturing yield.

Takanashi et al. also fails to teach the cushion layer, which is in physical contact with an entire surface of the recording paper on at least one side.

Koguchi et al. suggests providing a cushion layer (28) between the surface of a recording layer (26) and an image receiving layer (16) and suggests in Figs. 3A-3D that the cushion layer is in physical contact with an entire surface of the recording paper on at least one side, to confine any dust or dirt that may be present at the interface between the image receiving layer and the colorant layer (toner layer on the toner sheet). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a cushion layer between the surface of the recording paper and an image receiving layer and in physical contact with an entire surface of the recording paper on at least one side in the modified Takanashi et al. method because such provision would enable confining any dust or dirt that may be present at the interface between the image receiving layer and the colorant layer and thereby improve image quality.

With regard to claims 18 and 21, Takanashi et al. teaches the image receiving layer (binder layer 9a) adhering onto a whole recording region of the recording paper (recording sheet 3), and the recording paper, the image receiving layer, and the toner sheet being disposed one atop another along an outer circumferential surface of the recording drum (2), over at least half of the circumference of the recording drum (Fig. 5a).

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4. Claims 5 and 12/5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takanashi et al. in view of Koguchi et al., as applied to claim 1 above, and further in view of Fujimura et al. (U.S. 5,397,763).

Takanashi et al. in view of Koguchi et al. teaches the claimed invention except the cushion layer and the protective layer being formed as claimed.

Fujimura et al. teaches formation of a cushion layer formed between the surface of the recording paper and the image receiving layer in physical contact with the surface of the recording paper (column 7, line 45 through column 8, line 11 –1, see in particular column 7, lines 48-52, which indicates the physical contact by endowing the cushion layer with adhesiveness instead of providing an adhesive layer). Fujimura et al. further teaches provision of a protective layer on a transferred image to protect the image from damage (column 10, lines 62-66; column 11, line 58 through column 12, line 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a protective layer on the image recorded surface in Takanashi et al., as modified by Koguchi et al., for the purpose of protect the transferred image from damage.

Response to Arguments

5. Applicant's arguments with respect to claims 1-2, 4-5, 12, 17, 19-22 have been considered but are moot in view of the new grounds of rejection presented in this Office action.

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (703) 308-1281. The examiner can normally be reached on T-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin R. Fuller can be reached on (703) 308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722, (703) 308-7724, (703) 308-7382, (703) 305-3431, (703) 305-3432 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



HAI PHAM
PRIMARY EXAMINER

July 10, 2003